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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/445,710	03/13/2000	HANNU JUHANI LEINO	32107	1287

116 7590 05/10/2005

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EXAMINER

ALVO, MARC S

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 05/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/445,710

Applicant(s)

LEINO ET AL.

Examiner

Steve Alvo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The term "which cooperate without separate uses of their respective intermediate pH adjusting effects" was not originally disclosed and constitutes new matter. The original specification states on page 3, lines 3, last two full paragraphs, that "a combination of an alkali metal hydroxide and a carbon dioxide feed which feeds substantially counter each other's pH changing effect". Thus the disclosure indicate that the alkali metal hydroxide and a carbon dioxide counter each others pH effect, e.g. the alkali has an basic effect and the carbon dioxide has an acid effect. The acid and basic effect counter each other with separate uses of their pH effect; they do not "cooperate without separate uses of their respective intermediate pH adjusting effects" emphasis added.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over ADMITTED PRIOR ART (specification, page 1, paragraphs 0002 and 0003) in view of OSTBERG with or without G.B. Patent 815,527 with or without EP 0 281 273.

The ADMITTED PRIOR ART teaches that acidic papermaking stock entering the stock preparation system and the short circulation is run at neutral the conventional way of raising and controlling the pH is to add sodium hydroxide to maintain the pH at a pH of 7.0-8.5. However, the ADMITTED PRIOR ART further teaches that it is difficult to perform the pH adjustment in a controlled way due to the low inherent buffering ability of the pulp suspension. OSTBERG teaches (page 515, first paragraph) that it is "important to have an even pH of the pulp to the paper machine" and teaches that the pH can be stabilized, e.g. an even pH, by adding carbon dioxide to the pulp after the alkali addition, so that the pulp is buffered at a pH of 8.0. It would have been obvious to stabilize the pH of the ADMITTED PRIOR ART by adding carbon dioxide to buffer the pulp in the manner taught by OSTBERG. See OSTBERG, page 512, second paragraph for treating bleached or unbleached sulphate pulp. See page 509, middle of page for "CO<sub>2</sub> gas" dissolved. If not obvious to use an aqueous solution of sodium hydroxide then such is taught by G.B. Patent 815,527. It would have been obvious to that the alkali of OSTBERG et al could have been an aqueous solution of sodium hydroxide, as such is taught by G.B. Patent 815,527. G.B. Patent 815,527 further teaches that the sodium hydroxide could be added prior to the carbon dioxide (page 2, lines 35-41). Claim 9 is rejected as the use of pipes to add chemicals is well known in the papermaking art, if not obvious then such addition is taught by EP 0 281 273. It would have been obvious to add the alkali and carbon dioxide of OSTBERG using pipes as taught by EP 0 281 273. If necessary it would have been obvious to add the carbon dioxide of

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OSTBERG into the short circulation, e.g. just prior to the paper machine, as such is taught by EP 0 281 273. Claims 14, 17, 19, 21 and 23 are rejected as the alkali of the ADMITTED PRIOR ART would obviously lower the consistency of the pulp as it dilutes the pulp. If this is not obvious then the use of white water to dilute higher consistency pulp is taught by EP 0 281 273 (white water (46) dilutes refined pulp (62)).

Applicants' arguments that OSTBERG et al adjusts the pH in the pulp mill and not in the stock preparation system is not convincing as the ADMITTED PRIOR ART teaches controlling the pH in the stock preparation and short circuit. OSTBERG et al teaches the importance of having an even pH "in the paper machine". The "paper machine" is part of the stock preparation system and not part of the pulp mill. Besides, the addition of carbon dioxide to control the pH in the short circuit is taught by EP 0 281 273. It would have been obvious to control the pH of the ADMITTED PRIOR ART and/or OSTBERG et al in the paper machine by adding carbon dioxide to the short circuit in the manner taught by EP 0 281 273.

The argument that OSTBERG et al uses the sodium hydroxide to increase the pH is not convincing. This is the same use used by the sodium hydroxide of the instant invention. Page 3, second from last full paragraph of the instant specification states, "the alkalinity of a paper suspension is increased by adding thereto a combination of an alkali metal hydroxide feed and a carbon dioxide feed" (emphasis added) and on page 4, first full paragraph, "The hydroxide is according to the invention should preferably be added prior to the addition of the carbon dioxide to ensure that the carbon dioxide is added under alkaline conditions". Thus Applicant as OSTBERG et al uses the sodium hydroxide to increase the alkalinity. The argument that it would not have been obvious to use OSTBERG in combination with the Admitted Prior Art is not convincing as OSTBERG et al teaches using a combination of sodium hydroxide and carbon dioxide to buffer the pH of the pulp from the delignification stage to the paper machine (last full

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sentence of page 1 of OSTBERG et al). This would include the stock preparation system of the paper machine of the ADMITTED PRIOR ART.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

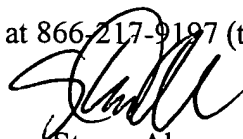
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Alvo whose telephone number is 571-272-1185. The examiner can normally be reached on 5:45 AM - 2:15 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Steve Alvo  
Primary Examiner  
Art Unit 1731

msa